

Experimental Products Development Team (EPDT) Supporting New AWIPS II Capabilities

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31st Environmental Information Processing Technologies Conference / 95th AMS Annual Meeting (2015) in Phoenix, AZ

Session: "AWIPS II System Update Part II"



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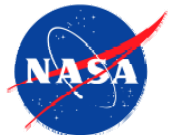


Origins of EPDT

- Originally SPoRT formed EPDT internally to focus on:
 - Creating advanced display capabilities for NASA research data in AWIPS II environment
 - Create training for AWIPS II development
- General need for AWIPS II development training within community
- Expanded EPDT out into the community
- Funded jointly by GOES-R Proving Ground, and NASA SPoRT
- Support from the National Weather Service



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GOES-R/JPSS Proving Ground EPDT

Objectives:

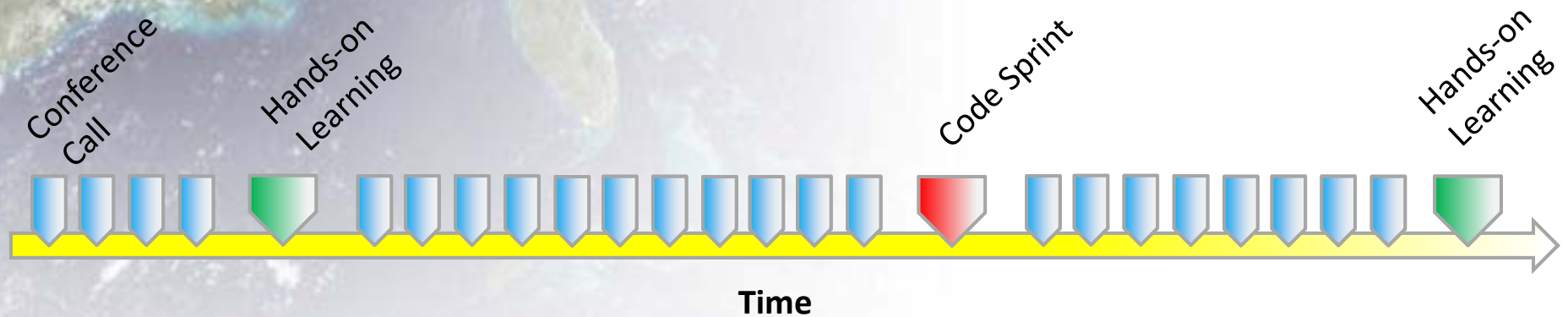
- Create a community environment to share AWIPS II development knowledge
- Develop technical expertise of AWIPS II within NASA, NOAA's CIs, and NWS
- Create AWIPS II plug-ins for GOES-R proxy and JPSS data
 - Ingest
 - Analysis
 - Display
- Provide feedback to NWS on:
 - External development process
 - Governance of locally developed AWIPS II software



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Learning Structure



- Conference Calls
 - Prepare for initial hands-on learning
 - Supplemental topics
- Hands-on Learning
 - Classroom setting learning
 - Learn to develop a plug-in from ingest to display
- Code Sprint
 - Participants pick project and “learn by doing”
 - Work on projects in small groups
 - Groups help each other

Hands-on Learning Training

- Topics covering:
 - Ingest Plug-in EDEX (Day 1)
 - Data Model Plug-in (Day 1)
 - Visualization Plug-in CAVE (Days 2-3)
- Hands-on exercises
- Training was recorded and provided back to NWS

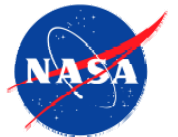


Code Sprint Training

- Team broken into small groups
- Groups actively develop project during sprint
- “Learn by doing” something meaningful
- Produce working AWIPS II feature by end of code sprint
- Continue working on feature after code sprint ends



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Group A and Group B

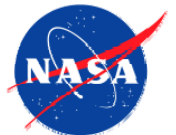
- Group A (14 Participants)
 - Conference calls began Fall 2012
 - Hands-on Learning March 2013
 - Code Sprint Fall 2013
 - Code Sprint Fall 2014
- Group B (14 Participants)
 - Conference Calls began Early Spring 2014
 - Hands-on Learning April 2014
 - Code Sprint Fall 2014

Participant Breakdown

- Limit size to facilitate group learning and development activities
- Participants are nominated by organizational leaders
- One representative from:
 - NWS Regions
 - Each NOAA Cooperative Institute (and SPoRT)
 - MDL and GSD
 - Raytheon
 - NWS SEC
 - GOES-R PG AWIPS II developer
- **Team Lead/Instructor:** Jason Burks (NASA SPoRT)
- **Instructor:** Max Schenkelberg (Raytheon)
- **Advisor:** Ed Mandel (NWS/OST SEC Development Branch Chief)



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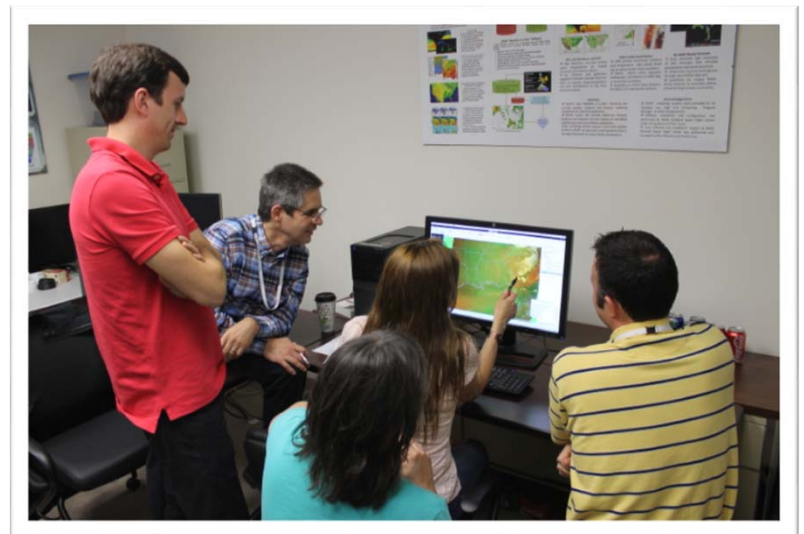
Group A Fall 2013 Code Sprint

- Sept 24 - 26, 2013
- EPDT subgroups worked on projects
 - Tracking Meteogram
 - RGB Recipe
 - mPing ingest and display
 - Mini-EDEX
- Significant progress
- Furthered learning

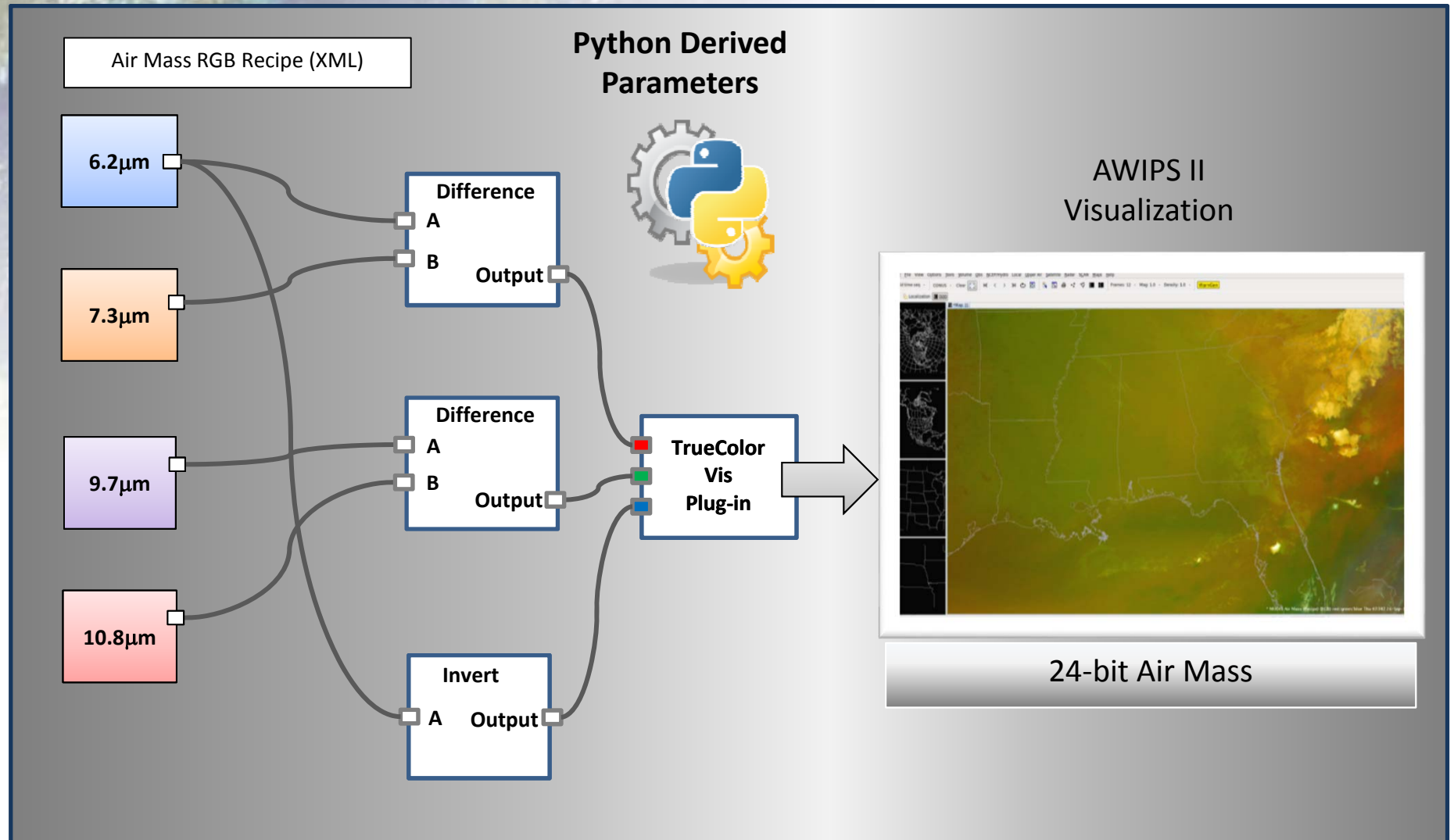


RGB Recipe Project

- Identified current deficiency in AWIPS II true color imagery display
- All EUMETSAT Recipes implemented
 - Air mass (VIIRS/CrIS)
 - Dust
 - Nighttime Microphysics
- RGB Composites
 - Natural Color composite
 - Snow Cloud composite
 - VIS/VIS/IR composite
- Can be used in 14.4.1, only localization needed
- Working on a configuration GUI



Example of RGB Recipe

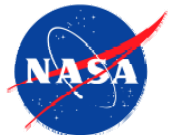


2014 EPDT Code Sprint Work

- GOES-R derived product ingest
- Phased Array Radar display
- National Centers Perspective (NCP) learning
- RGB Team EUMETSAT recipes



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Feedback/Improvements

- Collected feedback from Group A and B
- Adapted training based on feedback to make Group B training better
 - Expanded Visualization plug-in development section
 - Slowed down presentation of Visualization plug-in
 - Adjusted to take into account new features in AWIPS II

Future EPDT

- Group C in Spring/Fall 2015
- Adapt to latest build of AWIPS II available
- Previous EPDT Members continue to work on AWIPS II
- Previous EPDT members have real world experience troubleshooting problems in AWIPS II



Questions



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